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Editor - Captain L. B. Marshall, MC, USN

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Immediate Hysterectomy Following Irradiation for Carcinoma of the Uterine Fundus

The hazards of delay between the intrauterine application of radium and the surgical removal of the uterus must have occurred to many surgeons and radiation therapists. The delay in most instances is from 6 to 9 weeks, a period in which the irradiation action has been allowed to run its course before surgery is performed.

Approximately 2 years ago the authors suggested the feasibility of surgical removal of the uterus within 24 to 36 hours following the removal of the intrauterine radium. This suggestion was made with the thought that, if the uterus was removed within this time, the irradiation reaction would not have had time to manifest itself either grossly or histopathologically, and therefore would not present any problem to the surgeon. It was also thought that by the time the irradiation reaction was at its height in the remaining operative field, wound healing would be sufficient to cause no undue concern. This was confirmed by the ease of the surgical procedure made possible by the absence of irradiation reaction and the lack of postoperative complications that might be caused from the irradiation.

In this method of treatment the patient is hospitalized, and a tandem containing radon is inserted into the uterine cavity. The tandem consists of two brass tubes, each of 1.1 mm. filtration thickness and 4 cm. active length. The active ends are separated by a distance of 8 mm. Into each brass tube is inserted a platinum sleeve of 0.5 mm. filtration thickness, containing 55-60 millicuries of radon in a glass tube. The tandem, therefore, has a total strength of 110-120 millicuries of radon. Using radon decay tables, the time necessary to deliver a dose of 5,000-5,500 millicurie hours is calculated. The dosage varies somewhat with the estimated size of the uterine cavity, and extent of the tumor. The operation is performed 24 to 36 hours after removal of the tandem. Whenever the tumor was found to have invaded the myometrium or beyond, external irradiation through two anterior and two posterior pelvic portals was administered 1 to 2 weeks following operation. A total of 1,800 to 2,400 roentgens (air), depending on the size of the patient, was given to each portal at the rate of 200 r per day. Technical factors were: 400 kv. (peak), Thoraeus filter with half-value layer of 3.62 mm. Cu, 5 ma., 70 cm. target-skin distance.

As a rule, the surgeons have found the technical procedure less difficult with the immediate hysterectomy than with delayed operation; even at 9 to 10 weeks enough residual irradiation reaction may be present to complicate the operation. There has been no histopathologic evidence of irradiation changes in any of the surgical specimens from the authors' cases.

The most immediate advantage of this method is the reduced morbidity in the patients during the postoperative period. In no patient were any complications attributable to irradiation encountered. The courses of patients

without extension of the tumor were uniformly smooth. This is in contrast to the potential stormy course following surgical procedure in an inflammatory pelvic field, such as is present 6 to 10 weeks following irradiation.

An additional advantage is that postoperative roentgen irradiation, if desired, may be instituted sooner than would be possible when surgery is delayed. (Am. J. Roentgenol., Mar. 1953, E. A. Addington and R. A. Betts)

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Abdominal Pruritus in Pregnancy

Pruritus of the abdominal skin in pregnancy has received little or no attention in the textbooks and monographs dealing with dermatologic complications of gestation. Recourse to several of the widely used texts revealed no mention of this problem. Actually, pruritus is a symptom and not a disease diagnosis. It is, however, a common, persistent, and distressing symptom. By common usage the medical profession has come to regard pruritus as almost a disease entity in itself.

Like hiccough, heartburn, or sunburn, itching is one of the seemingly mild symptoms which seem humorous to observers but which may be desperately serious to the patient. No physician who has treated a refractory case of pruritus is likely to view the symptoms lightly. Indeed, the few moderately effective drugs are so limited in their application and so uncertain in their action that any new treatment for the relief of itching is certain to attract attention. Not infrequently, relief from uncontrolled pruritus is obtained by the patient only when the skin is severely traumatized by sharp objects. Frank pain then replaces the pruritus and brings relief from the less desirable of the two discomforts. Symptomatic relief of itching is of considerably more importance to the patient than etiologic eradication, which can be accomplished in a more leisurely way after the patient has been rendered comfortable.

In pregnancy, pruritus is usually limited to the vulval area and many reports have covered this phase of the dermatologic complications of pregnancy. Aside from the common specific sources of pruritic lesions there still remains a group without demonstrable cause which is commonly referred to as "essential," "psychosomatic," or idiopathic." Often the pruritic symptom-complex in this instance is on the basis of conditioned reflex activity and the itch-scratch-itch vicious cycle may persist after the instigating factor has been brought under control.

Alternate patients with uncomplicated pruritus abdominalis during pregnancy applied one of two antihistaminic topical preparations to the abdominal skin to evaluate the effectiveness of this form of therapy in the control of itching. Thephorin was used on alternate subjects as a 5% ointment or lotion (35 subjects), and Pyribenzamine 2% cream on a similar group (30 subjects) chosen alternately with the Thephorin group. The response to this

therapy was so clear cut that it was found possible to tabulate the results as either "improved" or "not improved." The cream, lotion, or ointment was applied locally to the anterior abdominal skin as often as the symptoms warranted.

In a group of 365 successive private obstetric patients, covering more than 2 years, the incidence of uncomplicated abdominal pruritus sufficient to warrant complaint during pregnancy was found to be 17.8%. The effectiveness of both antihistaminic drugs was found to be approximately the same; 9 out of 10 cases of pruritus abdominalis responded with complete disappearance of the itching within 10 to 15 minutes after application. It was usually not necessary to apply the medication more than 2 or 3 times daily. The lotion seemed to have more satisfactory esthetic qualities and had a higher degree of patient acceptance. The incidence of the symptoms appeared to be less during the first trimester than during the second and third trimesters of pregnancy.

To a great extent the highest peak of incidence occurred during the warm humid months of the summer season, but instances of severe or moderately severe abdominal pruritus occurred in patients at any time of the year including the cold winter months.

In common with pruritus elsewhere in the body, particularly the vulva, the itching is usually worse at night and in the summer. Possibly this is due to lack of distraction from the annoying symptom during the night as well as to increased warmth and humidity under bedclothes. In all instances in this series the skin was not different in appearance from that of the controls except for occasional scratch marks. Patients with discrete dermatologic lesions of the skin during pregnancy were excluded from the study. Urticarial reactions in the skin were not seen as concomitant factors in this study, and, when they were present, these patients were also eliminated from the series. (Am. J. Obst. & Gynec., Feb. 1953, S.C. Kasdon)

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Infectious Hepatitis in Pregnancy

Infectious hepatitis in association with pregnancy is described as rare. However, Ingerslev and Teilum recently reported a series of 91 cases. With very little effort, the author learned of 12 unreported cases in addition to the 4 seen at this hospital. There are no large statistics on such incidence available, chiefly because the disease is not reportable by law in most states. Unfortunately, many physicians do not record their experiences, particularly with the milder forms of hepatitis.

In view of the great variability in severity of hepatitis in general, it is easy to appreciate the many problems that hepatitis can pose in obstetrical practice. Javert and Morrison discuss anicteric jaundice and mention Irving's

study of vomiting in pregnancy with an 80% incidence of elevated icteric index, but no jaundice. There are frequent epidemics of minor gastrointestinal illnesses at all seasons. Many pregnant women have gastrointestinal complaints that are dismissed as functional or psychogenic. When these facts are assessed against the common occurrence of hepatitis, particularly without symptoms or overt jaundice, there is reason to suspect that it occurs commonly in pregnancy as well.

Infectious hepatitis is not an uncommon complication of pregnancy. Its true incidence is unknown and will remain unknown until reporting of this disease is legally required. Such action is recommended as a public health measure.

When hepatitis occurs in pregnancy, some cases will end by spontaneous abortion or premature labor. The maternal effects are not otherwise influenced by the presence of a pregnancy. Any interference with the pregnancy is contraindicated. The knowledge of possible fetal effects is incomplete, although it is important to state that there is no evidence to indict hepatitis as a direct cause of anomalies. Babies born of mothers with hepatitis need further study by investigative measures not generally available.

In 16 cases, 2 spontaneous abortions, 3 stillbirths, and 11 normal term births occurred.

Attention to dietary, metabolic, and electrolytic requirements is the most important therapeutic consideration. During periods of stress, as during necessary surgery, the use of adrenal cortical extract may be life-saving. Its use deserves further trial for evaluation. Gamma globulin may be employed as a prophylactic measure.

The maternal mortality is apparently no greater than in the nonpregnant with hepatitis. (Am. J. M. Sc., Feb. 1953, LT L. G. Roth, MC, USN)

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Tetanus Neonatorum

Infections of the umbilical stump were once extremely common, but have diminished in number with the introduction of aseptic obstetrical techniques. However, the practice of midwifery in some rural areas, and such unhygienic customs as placing dung or soot on the umbilical stump, still are responsible for an alarming number of infections yearly.

The mere fact that Clostridium tetani is present does not necessarily mean that tetanus will develop; local conditions in the wound must be suitable. The organisms will proliferate only in the presence of an oxidation-reduction potential far lower than that existing in normal living tissue. Such a fall in potential may occur as a result of the presence in the wound of necrotic tissue, soil, bits of cloth, metal, wood, or of tetanus toxin. Once the organism begins to grow, it produces toxin, and thereafter can maintain the

conditions necessary for continued multiplication. If conditions for growth are not optimal, tetanus spores may persist in the tissues for many months in a viable but dormant state.

From an experience with 26 cases of tetanus neonatorum at Charity Hospital, New Orleans, between 1946 and 1951, it is clear that recovery correlates more closely with the length of incubation period than with the type of clinical management. Prognosis is relatively good if onset is after the seventh day of life, but is extremely poor if symptoms appear earlier. A single liberal dose of antitoxin (100,000 units) is adequate. Subsequent to recovery the patient should receive toxoid for active immunization. Surgical debridement of the umbilical stump is not indicated. Maintenance of fluid and electrolyte balance is crucial. Carefully controlled administration of food, fluid, and, insofar as possible, medication through a polyethylene gavage tube is recommended. Although several drugs may be required for adequate sedation, phenobarbital orally, intramuscularly, or intravenously is the most useful single agent. Penicillin should be given and other antibiotics added as indicated for secondary infection. Continuous, highly skilled, and completely individualized nursing care is the most important aspect of therapy. The provision of universally adequate obstetrical care would promptly eliminate tetanus neonatorum. (J. Pediat., Mar. 1953, O. S. Spivey, C. G. Grulee, Jr., and B. T. Hickman)

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Ultrasound Therapy of Painful Postoperative Neurofibromas

The following is a preliminary report on the authors' experience with ultrasound therapy in a small series of painful neuromas, 4 in amputation stumps and 1 in a postoperative scar. The impression gained from this method of therapy strongly suggests the advisability of further study and application.

In medical use, ultrasound frequencies between 800,000 and 1,000,000 cycles per second are most suitable. Within therapeutic limits, ultrasound therapy produces 2 main effects, mechanical and thermal. The mechanical effect of the ultrasound wave causes tissue components to move back and forth at great speeds producing considerable mechanical pressures. The thermal effect, which is relatively mild, is produced by the conversion of the mechanical energy into heat, especially at different tissue planes.

Dernier in 1949 reported an upper extremity amputation neuroma that was successfully treated by ultrasound radiation applied locally and to the stellate ganglion. Chateau in 1951 was able to completely relieve 3 patients with painful amputation stump neuromas and phantom limbs by means of ultrasound radiation. All of these patients had previous unsuccessful surgical interventions for the relief of pain. In all of his cases, the terminal

amputation stump was treated locally except for 1 case which also required ultrasonic radiation to the site of the postoperative chordotomy which was performed for relief of the painful stump.

Most of the authors' patients had received other forms of therapy including nerve resections for painful neuromas, revisions of stumps, and numerous physical therapy modalities which had proved ineffectual or only partially effective. The ultrasonic machine employed in the treatment of these patients has an energy density of 0.5, 1.0, 1.5, 2.0, 2.5, and 3. 0 watts per square centimeter. The treatment head has a surface area of 5 square centimeters and the frequency is 1 million per second. The energy output can be used continuously or pulsed 1:5, 1:10, or 1:20.

Dramatic relief of symptoms was obtained in 4 of the 5 patients. The unsuccessfully treated patient had a personality disorder which makes evaluation of any treatment difficult. In addition, he complained primarily of a phantom type of pain which might have its origin in the central nervous system and not locally. It is admitted that this series of cases is very small and that no adequate follow-up could be made. Ultrasonic radiation appears to have an almost specific action on painful neuromas. There were no harmful effects produced by ultrasonic radiation in any of the patients. Further investigation of ultrasound therapy for painful neuromas will be continued. (Am. J. Phys. Med., Feb. 1953, I. Tepperberg and E. J. Marjey)

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Traumatic Dislocation of the Hip

It is difficult to differentiate dislocations of the hip from fractures of the acetabulum, the latter being a complicating factor in many cases of dislocated hip. The exact incidence of fracture of the acetabulum and its significance with regard to prognosis are important.

In the authors' series of 73 patients there were 24 with sciatic palsy of varying degrees of severity, 37 with fracture of the acetabulum, 7 with fracture of the femoral head, 2 with fracture of the femoral neck, and 2 with evidence of myositis ossificans.

A review of the records and follow-up letters to these patients indicated that 38 had some degree of traumatic arthritis and 10 had definite evidence of aseptic necrosis. Not all patients with so-called traumatic arthritis could be said to have evidence of aseptic necrosis; it simply could not be stated definitely, from the evidence available, whether there was such a complication or not.

Follow-up information was obtained on 17 of the patients treated primarily at the Mayo Clinic, and of these, 16 were treated by closed reduction and 1 was treated by open reduction.

Eight of the seventeen patients had injury of the sciatic nerve. One of these patients recovered completely, 4 were improved and 3 were unimproved. Four of the seventeen had pain, 8 had a limp, and 9 had normal movement of the hip. One patient had myositis ossificans.

Various surgical procedures were carried out in the entire series of cases as follows: open reduction with or without nerve exploration, 10 cases; cup arthroplasty, 8 cases; arthrodesis of the hip, 6 cases; osteotomy and cheilotomy, 2 cases.

Among the patients who underwent late open reduction and on whom satisfactory follow-up data were obtainable, none had a good result except 1 patient on whom a shelf operation was done for recurrent dislocation. This patient had no pain and a minimal limp at the time of follow-up. Two patients on whom cheilotomy was done had moderate pain but a severe limp, 1 of them using crutches or a cane.

Of the 8 hips (7 patients) on which Vitallium-mold arthroplasties were done, 4 represented satisfactory results. Another patient underwent bilateral arthroplasty elsewhere with a poor result, and 2 patients were not traced.

Of the 6 patients who were treated by arthrodesis of the hip, 2 had no pain and were satisfied, 2 had slight pain and there was a question whether the arthrodesis was solid, and 2 were not traced.

Early reduction by manipulation is indicated in all cases of traumatic dislocation of the hip. In cases in which fracture is a complication, reduction should be accomplished as early as possible, with careful open operation to remove fragments of bone and to replace larger fragments of the acetabular margin.

Evidence of injury to the sciatic nerve should be looked for, and in some instances exploration of the nerve should be performed.

Aseptic necrosis is a late complication. Nothing known to date will prevent the occasional occurrence of this complication.

Some element of traumatic arthritis develops in at least half the cases of uncomplicated traumatic dislocation and in most of the cases in which there is associated fracture.

Myositis ossificans is not a common complication. (Am. J. Surg., Mar. 1953, R. K. Ghormley and R. Sullivan)

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Change of Address

Please forward requests for change of address for the News Letter to: Commanding Officer, U. S. Navy Medical School, National Naval Medical Center, Bethesda 14, Maryland, giving full name, rank, corps, and old and new addresses.

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Subcapsular Nephrectomy

Subcapsular nephrectomy is the operation of choice in removing kidneys densely adherent to the adjacent structures. In such cases the pedicle is shortened and the renal vessels are imbedded in fibrolipomatous tissue making clamping and ligating very difficult. Frequent attacks of pyelonephritis, perinephritic inflammations, operations for recurrent calculi, advanced tuberculosis, and adhesions following renal trauma and gunshot wounds, are the principle causes of such adherent conditions. A few cases have been caused by unsuccessful pyeloplasty or nephropexy. Multiple operations for recurrent calculi usually associated with Proteus or Pseudomonas aeruginosa infections, a previous nephrostomy drainage, or destruction of renal tissue by calculi and infections have been the indications for the majority of subcapsular nephrectomies.

The renal fossa following subcapsular nephrectomy for tuberculosis heals readily with the postoperative administration of streptomycin. However, this is not the operation of choice in renal tuberculosis, but may be necessary in advanced cases in which marked adhesions occur.

Malignancy is the only contraindication for subcapsular nephrectomy, in which case wide dissection of the perirenal tissues is necessary.

The incidence of injuries to the adjacent structures—vena cava, intestines, adrenal, spleen, and pleura—is greatly reduced. In this operation these structures are protected by the renal capsule. The chief danger lies in the possibility of accidents while isolating and clamping the pedicle, for at this time the vena cava or duodenum are the most vulnerable structures.

The renal parenchyma is removed completely with minimal tissue injury so that healing is usually prompt and very little tissue or lymph space is opened to invite the spread of infection. The operation can be accomplished quickly with a minimum of trauma, blood loss, or shock. The wound heals readily and convalescence is uneventful. (Surg., Gynec. & Obst., Feb. 1953, Col. J.C. Kimbrough, MC, USA, and Capt. W.H. Morse, MC. USA)

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Prostatic Cancer

With the development of curative surgery for prostatic cancer as described by Young almost 50 years ago, there appeared for the first time a more hopeful outlook for certain persons who have developed the disease. The advent of hormonal therapy for adenocarcinoma of the prostate gland added a second powerful means of control.

Although originally designed for application to tumors thought to be metastatic, both castration and the administration of estrogen—or a combination of the two—have in recent years been used for "curable" cancer

as well. By the term "curable prostatic cancer" is meant that there is a microscopic diagnosis of adenocarcinoma which established the fact that there has not been extension of the neoplastic process beyond the genital fascial envelope (covering the seminal vesicles) and the anterior layer of Denonvilliers' fascia. Inherent in this concept of curable cancer is the finding of a normal level of serum acid phosphatase activity and absence of any roentgenographic evidence of bony metastases.

If it is admitted that radical prostatectomy does completely eradicate some of the early cancers, then it must also be admitted that an even greater number of lesions will not be entirely removed by the surgery. On the other hand, not even the most enthusiastic exponents of the hormonal control regimen are willing to cite their favored form of therapy as a panacea for prostatic cancer, although all agree that this kind of treatment is valuable.

From these simple considerations there has developed a program of combined radical prostatectomy and hormonal control therapy. This system was put into effect in the Division of Urology in the Francis Delafield Hospital slightly more than a year ago. By utilizing a routine of evaluation for persons suspected of having a prostatic tumor, which includes frozen section biopsy of posterior prostatic tissue in each case, it is likely that earlier lesions are being detected. The finding of a curable adenocarcinoma, according to the definition of the term stated here, is immediately followed by radical perineal prostatectomy, bilateral orchiectomy, and the start of oral estrogen medication. Diethylstilbestrol at a dosage of 500 mg. daily is given.

Since the adoption of this schedule for treating patients with apparently localized prostatic cancer, 40 patients started on the regimen. It has been gratifying to note that there were no operative or postoperative deaths. In a 100% follow-up it was found that all of the patients were still living, and that up to the time of this writing there was no evidence of metastasis in any of the cases.

Surely, with the passage of time, an appreciable number of metastatic lesions will appear in this group of individuals. Most probably, death will, in some instances, be attributable to prostatic cancer. However, there is reason to believe that the numbers of such therapeutic failures will perhaps be decreased from the cancer mortality statistics previously obtained by those who have relied entirely upon surgery or entirely upon hormonal control therapy as a means of management for "curable" adenocarcinoma of the prostate gland. (Surg., Gynec. & Obst., Feb. 1953, P. B. Hudson)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

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Anatomic Alterations of the Adrenal Cortex

Tumors of the adrenal cortex are of great interest because of the striking clinical conditions with which they are often associated. These include masculinization of women, feminization of men, precocious sex development of children, and Cushing's syndrome. Such interesting conditions are the clinical expressions of tumors that elaborate ketosteroids with androgenic or estrogenic effects. These remarkable changes have eclipsed the interest in nonfunctioning lesions of the adrenal cortex. This article comments on the anatomic alterations of the adrenal cortex that are not associated with hormonal disturbances and that are not malignant. The description of an unusual lesion of this type is included in the case report of a large benign cortical adenoma. Emphasis is directed to the clinical similarities of those cases from the literature in which large cortical adenomas are described.

Anatomic alterations of the adrenal cortex occur in three separate forms. These include extracapsular free cell clusters, adrenal cortical nodules, and adenomas of the adrenal cortex. The first two are minute, common, usually bilateral, extracortical, of no known clinical importance, and differ in that the latter are encased in a narrow rim of fibrous connective tissue. Adenomas of the adrenal cortex are usually macroscopic, intracortical, unilateral, and uncommonly associated with endocrine disturbances. Large nonfunctioning adenomas of the adrenal cortex are characterized by slow enlargement of a palpable upper abdominal tumor associated with symptoms referable to the gastrointestinal and genitourinary systems and without evidence of metastasis or endocrine disturbance. Weakness, malaise, and loss of weight may be prominent. Roentgen examination discloses downward displacement of the colon and kidney on the side of the tumor. Excision is curative. An additional case of large nonfunctioning adenoma of the adrenal cortex is described. (J. Urol., Mar. 1953, J.C. Smith)

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Meckel's Diverticulum

Because of its infrequency too little attention has been given to Meckel's diverticulum as a source of possible abdominal symptomatology. It is unusual for the average surgeon performing a laparotomy to look for a Meckel's diverticulum even when the source of abdominal pain is unexplained. Too often the surgeon will take out a normal appendix and fail to explore the ileum completely. It is not fully realized that even a normal-appearing Meckel's diverticulum may be a source of abdominal discomfort. It has generally been assumed that, in the absence of infection, ulceration or other demonstrable pathology, Meckel's diverticulum is a symptomless anomaly. It should be a routine in performing any laparotomy (when the ileum is

available for exploration and when the additional procedure is not a hazard to the patient) to explore the terminal 3 feet of ileum for a possible Meckel's diverticulum.

The most frequent symptom characteristic of Meckel's diverticulum is the occurrence of gross bleeding. Such hemorrhage is much more frequent in infancy and the first few years than it is in later life, although it may occur at any time from infancy to senility. Meckel's diverticulum may undergo peptic ulceration. Such peptic ulcers are usually present at the junction of the diverticulum with normal ileum. They give rise to bleeding which may be slow or profuse. Such blood when it traverses the colon may be evacuated as a tarry stool, or if the bleeding is very rapid it may be red to reddish black. It is never as bright as the bleeding which occurs from the terminal portion of the large bowel and this is often a clue to the site of bleeding. Any unexplained severe intestinal bleeding in an infant, or even in an adult, for which no other cause can be demonstrated, should be suspected of arising from a Meckel's diverticulum. If a careful history is taken in the adult, it will often be found that prior to the onset of bleeding the patient complained of ulcerlike pain. Such pain frequently bears a relationship to meals but is not relieved by the ingestion of food or alkali.

Carcinoma arising in a Meckel's diverticulum has been reported. Carcinoid tumors occasionally occur and even sarcoma of a Meckel's diverticulum has been reported. Ulceration of a Meckel's diverticulum may go on to perforation with a generalized peritonitis. If a generalized purulent peritonitis is present upon laparotomy in a child with a normal-appearing appendix, the ileum should be explored for the presence of a perforated Meckel's diverticulum. Occasionally the diverticulum will have a very narrow communication with the ileum. In such a case it may enlarge because of its inability to expel its contents and finally undergo pressure necrosis and gangrene. Or it may twist at its base and produce strangulation. Several instances have been reported in which a very long diverticulum has tied itself into a knot, producing strangulation of included small bowel. In intussusception and particularly in recurrent intussusception, consideration must always be given to the possibility that the start of the lesion may be a Meckel's diverticulum. The diverticulum produces this condition by becoming inverted into the lumen of the ileum, thus serving as a bolus which the ileum tries to propel forward. In so doing, telescoping of the diverticulum and the ileum into the more distal ileum occurs. This is one of the more frequent complications of Meckel's diverticulum. Finally the diverticulum may serve as a nidus for foreign bodies. Occasionally a concretion which may be radiopaque forms within the diverticulum. Unexplained round calcific shadows on x-ray should be suspected, in the absence of other demonstrable cause, of being enteroliths in a Meckel's diverticulum. At times an ingested foreign body will lodge within a diverticulum so that perforation by chicken bones and even vegetable shells may occur.

The diagnosis of Meckel's diverticulum is largely a clinical one and can be proved only by surgical exploration. The author reiterates that, in the presence of unexplained abdominal pain, peptic in nature or otherwise, the possibility of a Meckel's diverticulum should be strongly considered. Further, he reemphasizes the necessity for exploration of the terminal several feet of ileum at every laparotomy, when such exploration does not jeopardize the patient. The surgeon will be richly rewarded by finding a structure which is an important potential hazard to the patient if not the actual cause of the patient's symptoms. (Arizona Med., Feb. 1953, J. L. Whitehill)

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Military Medicine in Support of the Civil Defense Program

World War II brought ample proof that survival from modern war depends upon maximum national civilian and industrial mobilization in support of the military objectives and operations. The major national objectives today, therefore, are to learn what is required in military and civil defense, who should perform it and with what resources, and under what controls civil defense will be implemented most effectively.

Those concerned with future civil defense should be aware that the main objective of civil defense must be an unswerving devotion of civilians to holding on, to repairing and restoring the home community, enough that the Armed Forces may develop an offensive which will check and defeat an enemy. There are definite priorities for the military missions, success in civilian and industrial support of which depends on a clear understanding of those priorities, and of the programs for meeting them.

The military missions of any nation in order of priority should be to prevent military attack against the homeland; to attack and subdue enemy armed forces endangering the homeland; to attack and subdue the enemy homeland; and to occupy the enemy homeland and govern the enemy civilian population only so long as, and to the extent, necessary.

Primary missions of civil defense are defined by law as "activities and measures designed or undertaken (1) to minimize the effects upon the civilian population caused or which would be caused by an attack upon the United States, (2) to deal with the immediate emergency conditions which would be created by any such attack, and (3) to effectuate emergency repairs to, or the emergency restoration of, vital utilities and facilities destroyed or damaged by any such attack. Such term shall include, but shall not be limited to" certain prescribed measures to be taken not only in preparation for anticipated attack, but also during attack and following attack.

There are two major problem areas broadly covering the role of military medicine in civil defense and presented to both civil defense and military authorities. These are:

1. The preparation by military authorities for meeting their civil defense responsibilities: (a) In theaters of operations, outside the Continental United States and within the Continental United States. (b) Within the United States, without establishment of a theater of operations, for purely military purposes.

2. The preparation of basic plans by both civil defense and military authorities and logistical arrangements supporting these, under which civil defense operations will be implemented, previously integrated by mutual agreement and administered under the respective authorities.

Military medicine can provide immeasurable aid to civil defense by making available a systematic early solution of the first problem area. In doing so, benefits to military commanders can be visualized. Military medicine's role would be to develop and obtain an adequate troop basis for this role. Appropriate manning and equipment tables would need to be developed for military units expected to undertake the military responsibilities for civil defense. Job descriptions applicable to the medical civil defense unit personnel and specifications for the equipment items will need to be prepared, where different from the usual military counterparts. The military units for civil defense, although required in exceedingly small numbers and limited field of professional capabilities, would need to be identified in areas of higher headquarters staffs, field operational command staffs, and functional field units. Training programs and training media for reserve and active units would be required. Schedules under which these purely military units should be organized, trained, and mobilized solely for meeting military responsibilities in civil defense, would be required. (Mil. Surgeon, Mar. 1953, Brig. Gen. W. L. Wilson, MC, USA)

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Oral Use of Absorbable Alginate Derivatives

Alginates are derived from seaweeds which grow off the Irish and Scottish coasts. The primary seaweed derivative is alginic acid which is unstable. Sodium alginate is the basic product from which other alginates are made. Sodium is highly viscous in solution. By treating sodium alginate with calcium chloride an insoluble calcium alginate is precipitated. Calcium alginate is capable of being made into a wool or gauze.

Recent advances in the preparation of this material have resulted in its being made water-soluble and the rate of absorption can be varied by the replacement of some calcium ions by sodium ions. The result is that slow or fast absorbable materials can be used depending on the nature of the situation.

The alginate wool and gauze are absorbable, soluble, nontoxic, locally hemostatic, and compatible with antibiotic and antiseptic agents. When placed

into a bleeding area the material becomes viscous and sticky. The hemostatic action of the materials is apparently mechanical.

The material was supplied under the name of Calgitex, alginate wool and calcium, alginate ribbon gauze. The material is sterilized and is supplied in sterile glass tubes. It can be resterilized twice by autoclaving up to 18 pounds pressure for 20 minutes or by dry heat at 150° C. for 30 minutes. The material can be used directly from the tube if opened under sterile conditions. It is more expedient to transfer the material to a small sterilized covered container. The gauze type can be cut with sterile scissors to fit the socket or area as required.

The material was used for dental patients: (1) with primary bleeding; (2) with intermediary and secondary bleeding; (3) with a previous history of prolonged hemorrhagic tendencies.

Calcium alginate derivatives (wool and ribbon) were used to treat hemorrhage in 55 cases. Fifty of these cases were cases of bleeding following extractions, 5 following the use of thermocautery for soft tissue surgery. The materials gave evidence of being effective hemostatic agents compatible with antibiotic and antiseptic drugs. They seem to be especially effective in combination with thrombin. There was no clinical evidence that they produced greater postoperative reaction than in comparable situations when not used, nor do they appear to serve as a culture medium for bacteria. Absorption takes place in from 2 to 7 days.

Ninety-eight patients were treated. Ninety-four cases of bleeding were adequately controlled. In 4 cases the material was ineffective. Postoperatively 6 patients showed imperfect clot formation in the socket. (Oral Surg., Oral Med. & Oral Path., Feb. 1953, L. J. Allen)

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Dental Foundation of North Carolina

The dental profession of North Carolina, motivated by the highest ideals and possessing a strong conviction that dentistry through education and research must remain ever dynamic, has contributed and pledged to date more than $100,000 to the Dental Foundation of North Carolina, Inc. This activity in behalf of the Foundation is the beginning of a program which will expand constantly and have an increasingly significant and favorable influence on the University, its School of Dentistry, the entire profession, and the public.

The declared purpose of the Foundation is to make available to the University of North Carolina School of Dentistry funds for research, fellowships, lectureships, visual education, student loans, and other activities not supported by funds from state appropriations.

Fund raising is planned and carried out by the development committee, which is state-wide and includes division, district, and county chairmen.

This committee directed the initial October-November 1951 campaign, which resulted in the first $100,000. This committee continues to function, establishing the pattern for further development. Plans are being made for the solicitation of nondentists and for utilizing other media for raising funds.

The Dental Foundation, incorporated within the laws of the State, provides a medium whereby dentists and friends of dentistry may contribute with confidence to a program of dental education and research.

A foundation which has as its purpose aid to dental education, which is organized in a democratic manner and which receives encouragement from a university will receive substantial support.

A dental foundation with a sound organizational pattern will continue to grow and mature with the years. It is imperative that the officers and directors look not only to the present programs but to the future development of the Foundation.

Dental education must be dynamic. It must find ways and means through research to continue to contribute to total knowledge. If dentistry is to continue to grow in stature as a great health profession, additional support must be directed to education. The organization and development of other dental foundations, therefore, should be encouraged as an invaluable source for such support. (J. Am. Dent. A., Mar. 1953, J.C. Brauer)

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The Incidence of Respiratory Allergy

Respiratory allergy is a common disease. How common has hitherto been a moot question. Textbooks of allergy contain a disappointing disparity of statements.

Opportunity was recently afforded in a multiphasic screening clinic set up in Richmond, Va., for a fresh approach to this problem believed important not only for the allergist, but also for all those interested in the impact of chronic disease on social and economic life. Extending over a period of 7 months, this clinic, by questions and appropriate tests, was able to screen 37,497 persons over the age of 15 for evidence of 11 chronic diseases (asthma, seasonal hay fever, perennial hay fever, anemia, syphilis, diabetes, heart disease, hyper- and hypo-tension, rheumatic fever, and tuberculosis). This group included 10,017 white males; 21,863 white females; 2,725 colored males; and 2,892 colored females. Additional data obtained from each screenee included age, sex, race, height, weight, place of employment, and last year of schooling completed. Trained workers interrogated each of the screenees.

The results of this questioning were summarized and studied. Two thousand, two hundred and seventy-one individuals gave a history of respiratory allergy, 665 of whom were male, and 1,606 female; 2,091 were white, 180 nonwhite. Nine hundred and seventy-five gave a history of asthma; 1,135 of seasonal hay fever; 161 of perennial hay fever. From these results it

appears that in this age group within the limits of error, the incidence of bronchial asthma for both colored and white races is 2.6%; of seasonal hay fever, 3.0%; of perennial hay fever, 1.1%; and for all respiratory allergy, 6.0%. It is interesting that the percentage of allergy among the white screenees questioned with reference to allergic conditions was twice that of the colored screenees (6.6% as against 3.2%). There was no marked sex differentiation. The highest age incidence reported was between the years 20 and 60. These were also the decades in which the largest number of total screenees fell. Eighty-four percent of all reported cases occurred among persons between these ages.

About 6% of the population screened in this survey reported some manifestations of respiratory allergy. There are probably 3-1/2 million persons with bronchial asthma alone in the United States, constituting, from both an economic and a medical point of view, a serious problem in a society with an increasing burden of chronic disease.

As a group the individuals who reported a history of respiratory allergy in this survey included a higher proportion of white than nonwhite persons, tended to weigh more on the average, and were better educated. They differed little from the total group in age distribution.

As compared with the total group, those reporting a history of asthma were somewhat more likely to have had positive or doubtful test results for hypertension, diabetes, and tuberculosis. They were somewhat less likely to have had positive or doubtful tests for anemia and heart disease. (Industrial Med. & Surg., Mar. 1953, W. B. Blanton, E. C. Matthews, M. T. Tobin, and S. E. Shanks)

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Mercurial Diuretics: Use of an Oral Preparation

The induction of diuresis in chronic congestive heart failure by injection of mercurial preparations is the most rapid, effective, and reliable method available today. Very often, the control of the symptoms can be sustained only by so-called "maintenance doses" of the diuretic at frequent intervals. The chief hazards of this form of therapy arise because of hyponatremia and digitalis intoxication due to the mobilization and loss of fluid from body tissues.

In an attempt to overcome these objections, and yet retain the efficiency of the mercurial diuretics, oral preparations have been introduced. However, even this method has its drawbacks. To be effective, large doses of the drug must be ingested, the amounts used commonly causing nausea, vomiting, diarrhea, melena, or stomatitis. The occurrence of uremia and other types of renal intoxication has been reported. Unpredictability of action still remains a problem.

The purpose of this study was to attempt replacement of parenteral mercurial diuretics by a new oral drug labeled Ex 1431. Thirty-five patients who had been in congestive failure ranging in duration from 1 month to 11 years

were observed at the Adult Heart Clinic of the Los Angeles County Hospital, There was no selection of patients. All were ambulatory, and most of them had been receiving maintenance doses of digitalis preparations and had also been placed on low-sodium diets.

The dosage of the tablets varied; most often it was 1 tablet 3 times per day, twice weekly 3 or 4 days apart. Some patients received 1 tablet 3 times per day, once weekly, others 3 times weekly. On occasion 1 tablet twice daily, 5 days a week was given.

The period of observation varied from 1 to 11 months. At first patients were observed weekly for signs and symptoms of gastrointestinal or renal toxicity or other signs of intolerance, later they were seen at intervals of 1 month or more.

It is to be emphasized that prior to substitution by tablets, most of the patients had been receiving Mercuhydrin injections once or twice per week in order to control the congestive failure. The severity of failure was therefore of moderate to marked degree. Most patients were classified grade III C, or D, as to heart function and therapy according to American Heart Association standards.

The patients studied had advanced heart disease and significant limitation of physical activity. They were comfortable at rest. Their ordinary physical activity had been limited due to unusual fatigue, dyspnea, angina, or palpitation. They had been advised to discontinue their more strenuous everyday activities and habits.

It is the authors' belief that Ex 1431 oral mercurial tablets are of value in the following situations and for the following purposes: (1) For the maintenance of "dry weight" and control over the symptoms of congestive failure after the initial acute phase has been treated with parenteral mercurials, along with other adjuncts of therapy. In the acute, suddenly changing, rapidly progressive phase of congestive failure the oral mercurials are too slow and unpredictable, and therefore unreliable. Once the peak of the storm has leveled off the tablets can be used for interim "maintenance therapy." (2) In some instances of early, mild, or slowly progressive congestive failure. Not infrequently this form of failure can be initially treated with oral in place of injection therapy.

Oral mercurials are contraindicated: (1) In the presence of uremia and renal disease. It must be remembered that often albumen and casts in the urine may be due to congestive failure itself, and mercurials would help instead of harm the congested kidney. (2) When significant gastrointestinal disease is present. (3) In sudden, rapidly changing or progressive heart failure.

This drug was found to replace intramuscular Mercuhydrin effectively in "maintenance therapy" of mercurial diuresis for periods of from 1 to 11 months, in 80% of the patients studied.

Toxicity was observed in 6 patients (14%). Because of the relatively small amount of mercury necessary to attain diuresis, toxic reactions were

less than those reported after the use of other oral mercury preparations. (Circulation, Mar. 1953, S. P. Dimitroff, M. C. Thorner, and G. C. Griffith)

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Trichloroethylene

Trichloroethylene is a chlorine substituted derivative of ethylene having the structural formula of ClHC=CHCl. It thus resembles both ethylene and chloroform in its formula. In its physical properties, it more resembles chloroform, having a specific gravity of 1.46, a vapor density of 65.75, and a boiling point of 87° C. It has a slightly sweetish odor, similar to that of chloroform, and is noninflammable. When exposed to heat and oxygen, degradation products include phosgene, hydrochloric acid, and dichloroacetylene.

An attempt has been made to analyze trichloroethylene from the standpoint of possible abnormalities in physiology induced by this drug and its clinical usefulness in 1,032 patients. Experimental animals were also utilized in this study.

The authors made the following conclusions: Trichloroethylene produces no apparent adverse effect on renal or hepatic function or structure. In vapor concentrations below 0.5%, trichloroethylene produces little or no abnormality in cardiac rhythmicity, while in concentrations above 0.5%, cardiac arrhythmias consisting of unifocal and multifocal ventricular extrasystoles, bigeminal and nodal rhythms, and simple sinus bradycardias may be seen. These arrhythmias are infrequently apparent clinically and only occasionally produce a decrease in systemic blood pressure. There were no deaths during anesthesia and none which were related to the drug in the postanesthetic state. While these arrhythmias resemble those seen with chloroform and cyclopropane, no instance of serious cardiac dysfunction has been noted. Safe levels of trichloroethylene appear to be 0.5% vapor concentration or less. This is below the level producing tachypnea which is a definite indication of excessive trichloroethylene-vapor concentration. Trichloroethylene does not appear to induce either respiratory or metabolic acidosis. Trichloroethylene appears to increase cerebral blood flow moderately. Analgesia with trichloroethylene-air for the first stage of labor and for short painful procedures appears to be satisfactory and useful. This method, either alone or combined with regional anesthesia, may be used successfully for terminal labor. Transient and intermittent self-administration by the patient of vapor concentrations of trichloroethylene above 0.5% may be safe, because the patient releases the mask as soon as unconsciousness is attained. High blood levels are thereby prevented. Amnesia appears to be excellent. The newborn are not depressed unless higher concentrations are utilized continuously for more than 15 minutes or combined with the larger amounts of narcotic or sedative drugs. Combined with nitrous oxide-oxygen, trichloroethylene appears to produce successful light general anes-

thesia for terminal labor. As a supplemental agent, trichloroethylene may successfully be combined with the thiobarbiturates, nitrous oxide, and muscle relaxant drugs.

Trichloroethylene is an analgesic agent and should be used for that purpose. The authors believe that to use it as a primary anesthetic drug will result in vapor concentrations and therefore blood concentrations which are dangerous. It should be utilized to produce analgesia in a conscious patient or to supplement other anesthetic drugs. (Arch. Surg., Jan. 1953, W. K. Nowill, C. R. Stephen, and P. W. Searles) (See page 27)

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Use of Dimercaprol (BAL) Ointment in Chronic Chrome Dermatitis

Chrome compounds (chromic acid, chromates, and bichromates) are exceedingly active chemically and are powerful skin irritants. Their uses in manufacturing processes are many and varied. Chief offenders are the alkaline chromates—potassium, sodium, and ammonium bichromates.

Chromium compounds affect the tissue proteins, forming with them chemical compounds, as in the tanning of hides. In strong enough concentrations they corrode the skin and mucous membranes. Strong solutions not concentrated enough to corrode the skin may produce a toxic dermatitis. In still weaker concentration, the chromates may sensitize the skin and cause an allergic dermatitis.

Engelhardt and Mayer conclude that chrome dermatitis has become much more common since the photographic method was adopted in the printing trade. They found it in 1 of every 4 of a group of 114 lithographers who handled chromium salts. The frequency of sensitization to chromium compounds is shown by Bonnevie's work. He found that only turpentine, primrose, wood tar, and mercury salts were definitely able to cause sensitization more often than chrome compounds. Schwartz, Tulipan, and Peck also believe that chrome dermatitis is a common occurrence. They found that in 1,000 cases of occupational dermatitis in Ohio, 60 workers had chrome ulcers and 31 had chrome dermatitis.

There is no specific treatment for chrome dermatitis. The problem is therefore best approached by methods of prophylaxis. These include the wearing of long rubber gloves and the use of protective ointments. Petrolatum and hydrous wool fat (lanolin) or a mixture of the latter and liquid petrolatum have been suggested by Bering and Zitzke and Schwartz.

The use of 5% sodium bisulphite solution for cleansing the hands has been advocated by Engelhardt and Mayer and Parkhurst. This preparation reduces the chromium of bichromates with a valence of 6 to that with a valence of 3, the compounds of which are less injurious to the skin.

At best, the treatment of chrome dermatitis in the past has been symptomatic, consisting of application of wet dressings, lotions, and ointments as indicated by the acuteness or chronicity of the process in the individual case.

Results of a small-scale animal study are presented which showed 25 to 50% improvement within 1 week in animals with experimentally produced chrome dermatitis treated with 3% dimercaprol ointment.

A clinical study of 7 cases of chronic chrome dermatitis is presented. Intolerance to dimercaprol was noted in a single case. Two hospitalized patients with severe dermatitis showed complete clinical remission within 2 weeks with the daily application of 3% dimercaprol ointment to the affected areas. The 4 remaining patients, still exposed to chromates, showed up to 75% improvement with the continued daily use of the ointment for periods ranging from 2 to 5 months. No other instances of intolerance or sensitization were noted.

It is suggested that local use of 3% dimercaprol ointment may be of value in cases of chronic heavy metal dermatitis, particularly in chronic chrome dermatitis, for which the clinician has no other agent of known value or specific action to offer. The patients should be hospitalized to get best results. (Arch. Dermat. & Syph., Jan. 1953, H. N. Cole, Jr.)

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Quantitation of Biological and Other Data by Photoelectric Measurement of Area

An apparatus is described for the rapid and accurate measurement of a wide range of areas. Uniform illumination from a source passes through an optical system and impinges upon a photoelectric cell, which generates a current proportional to the radiant energy it receives. When an opaque object or surface is placed in a fixed aperture in the light path, the proportion of the light intercepted, and hence, the cross-sectional opaque area, is indicated by the reading of a galvanometer in the photocell circuit. Procedures for operation of the areameter and methods of calibration and calculation are given. The results are compared with those obtained by other methods, namely, by planimetric and gravimetric techniques. Applications of the areametric method to quantitative problems in physics, chemistry, and biology are cited. The rapidity, simplicity, and accuracy of the photoelectric method of area measurement as outlined in this report makes its use in electrophoresis, ultracentrifugation, and anthropometry advantageous. (Naval Medical Research Institute, National Naval Medical Center, Bethesda, Md., Research Report Project NM 000 018.07.21, 17 Nov. 1952)

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The Significance of Stainable Iron in Sternal Marrow Sections

Although sternal marrow biopsy is now part of the routine investigation of disorders of the hemopoietic system, few observations have been published regarding the amount of stainable iron in the marrow in these conditions. This may be because the usual method of marrow examination is by the preparation of smears and these do not allow satisfactory assessment of the iron content of the marrow. The preparation of tissue sections of aspirated marrow, in addition to the usual smears, has many advantages according to Cappel et al. It is now becoming generally recognized that both sections and smears should be prepared if maximum information is to be derived from the biopsy.

When information regarding the stainable iron content of the marrow is required the superiority of sections over smears is very evident. It is, indeed, only when sections are used that the full possibilities of the method become apparent. In this case the iron is stained in the reticulo-endothelial cells in situ; this not only displays the amount of iron more accurately but is a safeguard against confusion with artefacts which normally can be recognized by their failure to conform to the shape of cells and by lying in a different plane. In smears, on the contrary, the reticulo-endothelial cells are not well displayed; they seem to spread poorly when the preparation is being made and so are often hidden under clumps of other cells. Further, they are fragile; they commonly rupture during the preparation of the smear and as a result their iron granules are strewn haphazardly over the slide and bear no relationship to any particular cell. Thus when smears are used there are two sources of error (1) small amounts of iron in the marrow may be missed and (2) false positives may be recorded owing to confusion with stain precipitate or other artefact.

This article gives an account of the results obtained from the routine application of the prussian blue reaction to histologic sections prepared from the sternal aspirates of 150 patients. The conclusion reached is that this simple histochemical test provides a reliable measure of the iron stores for the purposes of diagnosis and treatment of disorders of the blood.

In the author's opinion his investigation has established the fact that in an anemic subject the absence of stainable iron means that the patient is iron deficient. He believes that this technical method gives the most decisive hematologic indication yet devised for the recognition of iron deficiency and of the necessity for iron therapy. Also the converse has proved true: if stainable iron is present in the marrow the anemia will not be improved by the administration of iron whether by mouth or intravenously. Over the past 2 years the method has been used for the control of iron therapy; it has not failed and the author has been able to predict accurately when an anemia would be likely to respond to iron. The absence of stainable iron from the marrow seems a more sensitive index of iron deficiency than does

lowering of the mean corpuscular hemoglobin concentration. When anemia develops as a result of iron deficiency there is not only a fall in the concentration of hemoglobin in the cells but also a reduction in the cell volume. This minimizes the fall in the M. C. H. C. which is usually not sufficiently pronounced to be a clear indication of the necessity for iron therapy until the anemia is well marked. (Blood, Mar. 1953, H. E. Hutchison)

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Retinal Arteriolar Signs of Hypertension

It is known that the arterioles of patients who have vascular hypertension are essentially normal early in the clinical course of the disease. As the process increases, changes in the arterioles occur which tend to become progressively more advanced in proportion to the severity and the duration of the hypertensive process. As a result of this, advanced changes usually occur in the systemic arterioles during the end stages of the disease.

The clinical course of hypertension may be relatively rapid (acute hypertension) in some patients and relatively insidious (chronic hypertension) in others. It is not so well known that the retinal arteriolar signs, when properly interpreted, may indicate which of these courses the disease is most likely to pursue, because the signs are quite different and characteristic for the rapid and slow forms of the disease. It is therefore impossible to overestimate the importance of making the distinction between the relatively rapid and the chronic form of the disease on the basis of the retinal arteriolar signs, especially since attempts to evaluate medical or surgical results are much less meaningful when the chronic and the acute form of hypertension are not differentiated.

This article describes the ophthalmoscopic characteristics and the usual clinical significance of the four grades of the three main types of retinal arteriolar signs of hypertension. Such signs as sheathing, occlusions, and tortuosity were excluded because they occur infrequently and have less prognostic significance.

These retinal arteriolar signs are illustrated by schematic drawings and fundus photographs. The grading and grouping of these signs are based essentially on the report of the Committee on the Classification of Hypertensive Diseases of the Retina of the American Ophthalmological Society.

There are three main types of retinal arteriolar signs which occur in hypertension. They are (1) generalized narrowing, (2) focal constrictions, and (3) generalized arteriolar sclerosis. The first two are associated with those types of hypertension which pursue a relatively rapid clinical course. The third is characteristically associated with the form of hypertension whose clinical course is one of insidious progression. Each of these three types may be separated into 4 grades, each grade representing an increasing degree of

arteriolar involvement. Mixed combinations of these signs are frequently encountered. The grading is not intended to be an exact science, and slight variations in interpretation may occur. (Postgraduate Medicine, Mar. 1953, G. G. Gibson and R. H. Peckham)

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American Society of Anesthesiologists, Inc.

At the annual meeting of the American Society of Anesthesiologists, the following recommendations of the Armed Forces Committee, were among those approved:

1. That the American Society of Anesthesiologists endorses the action of the Surgeon General in disapproving the administration of spinal anesthetics by nurse anesthetists. The Society further recommends that nurse anesthetists be neither taught nor allowed to administer anesthetics intradurally, in Army installations.
2. That cyclopropane and appropriate apparatus for its administration be made available to hospitals having trained and experienced anesthesiologists possessing an M. O. S. 3115A, B, or C.
3. That muscle relaxants be made available to hospitals having trained and experienced anesthesiologists possessing an M. O. S. 3115A, B, or C.

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Commanding Officers of Naval Reserve Medical Companies Commended by Chief of Naval Personnel

Captain Ralph E. Duncan (MC) USNR, Commanding Officer, Naval Reserve Medical Company 9-4, Kansas City, Mo., and Captain Everett C. Fox (MC) USNR, Commanding Officer, Naval Reserve Medical Company 8-1, Dallas, Tex., recently received letters of commendation from the Chief of Naval Personnel as a result of their respective commands being evaluated OUTSTANDING by the cognizant Commandant. The letters stated in part:

"1. I note with pleasure that. . . . . Naval Reserve Medical Company 9-4 (8-1) under your command, was evaluated OUTSTANDING by the Commandant, NINTH (EIGHTH) Naval District for Fiscal Year 1952.

"2. This creditable showing could result only from noteworthy leadership on your part and excellent cooperation and performance of duty by the personnel under your command. I commend your entire Company for its excellence, and I send it a hearty 'well done'."

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List of Recent Reports Issued by Naval Medical Research Activities

Naval Medical Research Unit #3, Cairo, Egypt

1. Amphibians and Reptiles From Yemen. NM 005 050.39.16, 1951.
2. A New Larval Mite (Acarina: Trombiculidae) From Eritrea. NM 005 050.30.25, Sept. 1952.
3. Ornithodoros arenicolous Sp. Nov. (Ixodoidea, Argasidae) From Egyptian Desert Mammal Burrows. NM 005 050.29.13, 30 Dec. 1952.
4. Susceptibility of Laboratory Animals to Infection by the Egyptian "Strain" of Schistosoma mansoni, with Emphasis on the Albino Mouse. NM 005 050.10.01, 1952.
5. The Housefly as a Carrier of Pathogenic Human Enteric Bacteria in Cairo. NM 005 083.06.01.

Naval Medical Research Institute, NNMC, Bethesda, Md.

1. Sorption of Vapors by Polymers. NM 000 018.06.13, 5 Nov. 1952.
2. Light Scattering Studies of Some Muscle Proteins. Memorandum Report 52-14 related to NM 000 018.06, 18 Nov. 1952.
3. The Reversible Depolymerization of Fibrin. Memorandum Report 52-12 related to NM 000 018.06, 20 Nov. 1952.
4. Reversible Association Processes of Globularproteins. I. Insulin. NM 000 018.06.22, 18 Nov. 1952.
5. Polymerization of Iodinated Fibrinogen. NM 000 018.06.21, 18 Nov. 1952.
6. Size and Shape of Polyelectrolyte Molecules in Solution. NM 000 018.06.16, 25 Nov. 1952.
7. Statistical Thermodynamics of the Transition Region Between Two Phases. I. Thermodynamics and Quasi-thermodynamics. NM 000 018.06.17, 3 Oct. 1952.
8. Some Statistical Mechanical Models of Elastic Polyelectrolytes and Proteins. NM 000 018.06.12, 25 Nov. 1952.
9. Light Scattering Studies on the Clotting of Fibrinogen. NM 000 018.06.20, 18 Nov. 1952.
10. Absorption of X-rays by Tissues of the Head and Neck. NM 006 012.06.61, 16 Dec. 1952.
11. Rates and Energies of Activation of the Acid-catalyzed Hydrolysis of Adenosine Triphosphate. NM 000 018.06.19, 7 Nov. 1952.
12. The Degradation of Carpaine to a Ketotetradecanoic Acid. NM 007 081.13.02, 7 Nov. 1952.
13. Orbital Overlap and Carbonyl Reactivity in Methyl Cyclopropyl Ketone. Memorandum Report 52-17 related to NM 000 018.07, 17 Nov. 1952.
14. The Reproducibility and Constancy of the Platelet Counts. NM 006 012.05.10, 17 Nov. 1952.
15. Transmission of Non-Periodic Filariasis in the South Pacific. Lecture and Review Series No. 52-11, 12 Dec. 1952.
16. The Kinetic Analysis of Some Fast Biochemical Reactions. Lecture and Review Series No. 52-10, 18 Nov. 1952.

Attendance at Meetings of Scientific, Technical, Professional, or Similar Organizations

Ref: (a) SecNav Instruction 7200.2 dtd 16 Oct 1952
(b) BuMed Ltr BUMED-233, L20-1, dtd 30 Apr 1951

Attention of all naval activities which sponsor attendance at meetings of scientific, technical, professional, or similar organizations is invited to the provisions of references (a) and (b), which must be strictly adhered to when requesting approval for the expenditure of funds incident to attendance at such meetings. Reference (a) prescribes the procedures to be followed when requesting approval for attendance, and reference (b) prescribes the prerequisites to such attendance involving travel and expenditure of public funds. These prerequisites (of which one or more must be met) are:

(a) Designation of the officer by the Bureau as an official Navy representative at the meeting or conference.

(b) The officer concerned has been invited by an appropriate organization and the acceptance of such invitation to present a professional paper at the conference or meeting has been authorized by the Commanding Officer.

(c) The officer concerned has been invited by an appropriate organization to participate in a panel discussion at the conference or meeting and the acceptance of this invitation has been authorized by the Commanding Officer.

To insure prompt processing of NavExos 3557 (Conference Travel Request and Approval), the following factors are pertinent:

(a) Prompt submission of NavExos 3557 to reach the Bureau of Medicine and Surgery at least 3 weeks prior to scheduled departure from duty station.

(b) Completion, in detail, of NavExos 3557 to enable reviewing authorities to determine necessity for attendance, travel, and expenditure of funds.

(c) Limitation of dispatch requests for approval to bona fide emergencies. Such requests require that the Chief of Bureau personally obtain Assistant Secretary of Navy for Air approval.

Attention is invited to the fact that commands authorized to issue temporary additional duty orders may also issue authorization orders at no expense to the Government for attendance at meetings of scientific, technical, professional, or similar organizations when the provisions of references (a) and (b) cannot be met and when it is considered that attendance is desirable and the services of the attendee can be spared. (PersDiv, BuMed)

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Undesirable Effects of Trilene

In view of the growing popularity of trichloroethylene (Trilene) as an analgesic agent in the performance of certain minor surgical procedures, a preliminary report from one of the naval medical officers serving with the Marines in Korea is of timely interest. Tried in approximately 25 combat casualties for such procedures as wound debridement, reduction of compound fractures and application of plaster casts, the use of Trilene has been abandoned because of the undesirable side-effects produced by this agent in wounded men. While under the influence of the drug these individuals showed a marked tendency to "relive" their battle experiences and to become hyperirritable and excited. Symptoms were so pronounced in most instances as to preclude satisfactory accomplishment of the indicated surgical procedures. Preanalgesic sedatives were of no apparent benefit. (OperMed, BuMed)

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From the Note Book

1. One hundred and thirty-four officers of the Armed Forces of the United States and Canada attended the Navy Medical-Military Training Program, a 2-week course which convened on 16 Mar 1953 at the Naval Medical School, National Naval Medical Center, Bethesda, Md. The officers by corps were: USN Medical Corps, 1; USNR Medical Corps, 46; USNR Dental Corps, 35; USNR Medical Service Corps, 10; USNR Nurse Corps, 2; USNR Hospital Corps, 2; USNR Line Officers, 2; USA Medical Corps, 8; USAF Medical Corps, 17; and Royal Canadian Air Force and Navy Medical Officers, 11. In addition, 18 Dental Corps officers attending a postgraduate course of instruction in Naval Dentistry at the Naval Dental School, NNMC, and 24 dental interns attended. (TIO, BuMed)

2. BuMed Instruction 6500.1 of 6 Mar 1953 directs the attention of all medical and dental officers to the need and opportunities for officers to engage in research.

3. Information on how serious shortages of medical, dental, and hospital supplies during emergencies may be averted is being made available through studies now being conducted by the Public Health Service, Federal Security Agency. Determinations of current civilian requirements are being made for the first time on a unit basis, and these requirements are then projected into the future to coincide with an assumed mobilization period. (P.H.S., F.S.A.)

4. The clinical, radiologic, and pathologic features of 7 cases of intrathoracic bronchogenic cysts are described in the American Journal of Clinical Pathology, Feb. 1953, E. L. Heller, J. H. Householder, and A. M. Benshoff.

5. Four cases of hypoplasia of the bone marrow associated with therapeutic administration of radioactive colloidal gold are reported. The isotope has been used to treat isolated tumor nodules, carcinoma of the prostate, carcinoma of the cervix, leukemia, and pleural and peritoneal effusions due to carcinoma. Severe bone marrow depletion was present at the post-mortem examination of the 4 patients. None had received x-ray therapy or any drug know to depress the bone marrow. This hazard to the blood-forming tissues should be considered in the clinical use of radioactive colloidal gold. (J. A. M. A., 7 Mar. 1953, T. W. Botsford, H. B. Wheeler, R. A. Newton, and W. E. Jaques)

6. Three cases of tattooing of the forearm are reported which were successfully treated by abrasion with sandpaper. The results were cosmetically satisfactory. (Arch. Dermat. & Syph., Jan. 1953, E. A. Strakosch)

7. Veterinary medicine must provide services and skills in strengthening and maintaining a strong national defense. It is concerned in the prevention of disease and in providing safe foods in adequate quantities to maintain the health, welfare, and morale of the people during and following a national emergency. (Mil. Surgeon, Mar. 1953, F. A. Todd)

8. Naval Reservists who are psychologists, sociologists, electronic technicians, and those with medical experience are invited to volunteer for unusual duty in testing various articles of cold weather clothing devised by the Research and Development Division of the Navy Clothing Supply Office. The test site is located on Mt. Washington, N. H. (The Naval Reservist, Mar. 1953)

9. A preliminary report of an evaluation of the Airdent unit will be found in the Journal of the American Dental Association, Mar. 1953, A. H. Morrison and L. Berman.

10. Injections of soluble detoxified alum, precipitated pertussis vaccine given to 22 infants at 4, 8, and 12 weeks of age produced satisfactory pertussis agglutinin titers in all babies. In 90% the titers were high. (J Pediat., Mar. 1953, S. M. Lippsett, et al.)

11. In 11 consecutive cases of acute hemorrhagic pancreatitis the authors found impressive clinical evidence that human serum albumin influenced favorably the course of the disease. (Surg., Gynec. & Obst., Feb. 1953, H. N. Kenwell and P. B. Wels)

BUMED INSTRUCTION 6310.2 27 Feb 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical Department Personnel Regularly Assigned

Subj: Basic Diagnostic Nomenclature; improper use of certain titles

Ref: (a) Joint Armed Forces Statistical Classification and Basic Diagnostic Nomenclature (NavMed P-1294)

1. This instruction directs that positive steps be taken to correctly use the diagnostic titles as outlined in the body of the directive.

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BUMED INSTRUCTION 1520.2 27 Feb 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Dental Corps Personnel Regularly Assigned

Subj: Graduate and postgraduate training for officers of the Dental Corps, U.S. Navy

Ref: (a) Article 6-82, ManMedDept

1. This instruction informs all officers of the Dental Corps, U.S. Navy concerning graduate and postgraduate training.

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BUMED INSTRUCTION 4063.2 3 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Hospital Ration; value of

Ref: (a) Art 21-33 (2) (b), ManMedDept
(b) Par 54025-2c(1), BuSandA Manual
(c) Par 54011, BuSandA Manual

1. The current value of the hospital ration as prescribed by the Secretary of the Navy is $1.20 per ration.

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BUMED INSTRUCTION 6224.3 9 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: Commanding Officers, Naval Hospitals, Continental

Subj: Tuberculin testing of Medical Department personnel assigned to hospitals for duty on the staff

Ref: (a) Art 15-91(3), ManMedDept
(b) Art 16-54(4), ManMedDept

1. This instruction promulgates the procedure to determine, if possible, the rate at which personnel of the Medical Department assigned to hospitals for duty on the staff acquire evidence of tuberculous infection. BuMed C/L 51-121 is cancelled.

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BUMED INSTRUCTION 6710.3 9 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Sulfanilamide powder in first aid dressing kits; discontinuance of use of

1. Medical Department representatives are directed to instruct personnel to destroy sulfanilamide powder found in individual troop first aid dressings at the time each such kit is opened for use. BuMed C/L 51-42 is cancelled.

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BUMED NOTICE 5215 10 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: BuMed circular letters; cancellation of several

1. The following BuMed circular letters are cancelled: 46-76, 46-161, 47-25, 47-29, 47-36, 48-40, 48-140, 49-92, 49-129, 50-1, 50-13, 50-90, 50-93, 50-121, 50-137, 51-2, 51-8, 51-40, 51-55, 51-60, 51-123, 51-157, 52-3, 52-10, and 52-47.

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BUMED INSTRUCTION 6150.8 11 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical/Dental Personnel Regularly Assigned

Subj: Standard Form 513 (Consultation Sheet) in the case of Outpatient Members of the Naval Service; incorporation in the Health Record of

Ref: (a) ManMedDept

1. This instruction provides for incorporation of Standard Form 513 (Consultation Sheet) in the Health Record in lieu of transcribing data therefrom to NavMed H-8 (Medical History) or Standard Form 600 (Chronological Record of Medical Care). This instruction is effective upon receipt.

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BUMED INSTRUCTION 6200.3 12 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: U.S. Navy Preventive Medicine Units; functions of and methods of requesting the services of

1. This instruction promulgates the mission and functions of U.S. Navy Preventive Medicine Units. BuMed C/L 49-85 is cancelled.

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BUMED INSTRUCTION 5202.2 6 Mar 1953

From: Chief, Bureau of Medicine and Surgery
To: National Naval Medical Center, Bethesda, Maryland
Naval Hospitals, continental

Subj: Civilian Personnel Services Work Measurement Program

Encl: (1) Definitions and Reporting Instructions

1. This instruction clarifies the meaning and intent of enclosure. BuMed C/L 50-128 and 51-147 are cancelled.

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PREVENTIVE MEDICINE SECTION

New Atlas of Epidemiology

Geomedicine as a branch of epidemiology was firmly established in Germany by the end of World War II. As early as 1881 an authoritative outline of medical geography—a "Handbook of Historical and Geographical Pathology," by Hirsch—was published. In World War II an "Atlas of Epidemic Diseases" in areas of military importance was prepared under the direction of H. Zeiss of the University of Berlin. It incorporated the concept of the earlier atlas but featured maps of many colors to show up relationships between the varying incidence of epidemic diseases and the nature of the particular geographical environment in which they occurred. A further development is a new concept of a world-wide survey of how epidemic diseases are distributed, and of how the prevalence of such diseases is related in time and place to geographical features (climatologic as well as other). Part I of such a survey has now been published under the sponsorship of the Navy Bureau of Medicine and Surgery, with Professor Dr. med. Ernst Rodenwaldt as coordinating editor. The work is entitled "World-Atlas of Epidemic Diseases."

The following is quoted from the foreword by CAPT A. R. Behnke (MC) USN, project coordinator from April 1950 to July 1952: "The Atlas should offer valuable basic material to medical historians and to public health workers in the planning of their community health programs. The epidemiological maps should be of interest also to others outside purely medical circles. They should be useful to those engaged in economic and technical planning for the development of new areas—the prevalence of certain types of infectious diseases may severely restrict or even altogether prevent the initiation of any such projects. They may be useful, too, in general lay instruction, since some idea of the distribution of diseases and the problems of their control should form part of any good general education.

"The work, moreover, may be regarded as a contribution to methodology, showing a new type of geographical map and indicating the possibilities and limitations of the cartographic method itself in the portrayal of the different features of disease. Improvements in present methods and extension of their scope will, it is hoped, be thereby stimulated."

Background and explanatory material is given in German and in English, grouped by causative factors of epidemics. These etiologic groupings, which are also those of the maps, are bacteria, spirochaetae, virus, rickettsia, protozoa, and metazoa. Climatology, distribution of population, and basic maps are also included. A different color is used for each of these types of disease, and easily recognized symbols employed for the various animal vectors and hosts. A screw-type binding permits rearrangement of the maps and explanations as desired.

Certain limitations of the book are recognized and laid to availability of data and of competent coworkers at the time the book was started. It is pointed out that this volume is only the first part of the World-Atlas (showing Europe and the Mediterranean area principally) and that future work will cover additional diseases and areas.

In his introduction Dr. Rodenwaldt states: "The possession of this work spares the reader the trouble of reading elaborate texts which can only be understood by making abstracts to obtain a comprehensive picture of the epidemiological events. Within the limits of presentation on maps, the reader should have an opportunity to obtain at a glance a clear view of the whole disease situation and its relationships in all stages. For the layman, however, for whom study of the scientific medical literature would be a useless task, these maps—also at one glance—show in what extent and from where his individual existence, with all its implications with regard to the economy and the nature of his country, is menaced by the epidemic movement."

BuMed has a limited number of copies of Part I of the Atlas and will make distribution to major hospitals and research facilities. Requests from other activities that anticipate a need for the volume may be made in writing to the Bureau and will be given consideration.

Communicable Disease Control

Geomedical Disease Evaluation

An important part of the preventive medicine program being sponsored by the Bureau of Medicine and Surgery is the collection of geomedical data, particularly from areas in which little is known of the disease prevalence or of what military hazards might exist in such areas. The older approach has been to evaluate disease hazards, in various geographical areas, from literature sources. The newer BuMed approach in obtaining data is by on-the-spot surveys, from which the information obtained is very much more realistic. As an example of this approach, a Navy medical group accompanying the University of California expedition in 1948-49 travelled from Cairo to Capetown by jeep and truck convoy, making perhaps the most extensive medical survey of the African continent ever attempted. As a result of this survey, definitive evaluation was made of disease hazards and an excellent tropical disease teaching collection was obtained for the U. S. Naval Medical School. This collection is now in use for indoctrination of medical officers in exotic disease problems.

A more recent contribution to this newer approach in geomedical disease evaluation is seen in a series of articles, the first three of which have just appeared in the January 1953 American Journal of Tropical Medicine and Hygiene. These articles, entitled "Medical Mission to the Yemen, Southwest Arabia," were undertaken by a special team of scientists from U. S. Naval Medical Research Unit No. 3 in Cairo, Egypt. The Yemen previously has been almost completely closed to visiting medical scientists. There is probably no country in the world on which there are so few factual data concerning the health of the country. The Yemen government, cognizant of the value of such a health analysis, invited NAMRU-3 to carry out a general survey of the prevailing sanitary and health conditions. The over-all findings are summarized as follows:

"A geomedical survey of three geographic regions of the Yemen was made during January and February 1951. On the basis of this survey it would appear that there are at least 10 major disease problems in the Yemen, irregularly distributed through the principal geographic regions. In the lowlands (Tihama) as well as elsewhere, dysenteries, intestinal parasitism, venereal diseases, nutritional diseases, tuberculosis and eye diseases are common. This region has more malaria than the highlands but considerably less than the middle heights. Schistosomiasis occurs here to about the same extent as it does in the highlands but far less frequently than in the vicinity of Ta'izz in the middle heights. Typhoid fever appears to be fairly common in all three regions. In the middle heights, major disease emphasis is on schistosomiasis, malaria, venereal diseases, the dysenteries, tuberculosis, typhoid fever, typhus and trachoma. The highlands differ in that there is less schistosomiasis and malaria, and perhaps less dysentery."

A second contribution from a survey of the Yemen concerns intestinal protozoa and helminth parasites. A single fecal examination revealed from 37 to 65% of the population to be infected with Endamoeba histolytica. From 8 to 89% of the population, according to the locality sampled, harbored Ascaris lumbricoides. Two species of Schistosoma were prevalent, urinary and intestinal, with the incidence varying between 2 and 10% for the urinary type and between 4 and 56% for the intestinal form. In this regard, NAMRU-3 made what appears to be a unique epidemiologic finding in that the religious ablution pools in mosques apparently serve as a principal source of infection for Schistosoma mansoni infections. From a control standpoint the use of copper sulfate in these restricted foci of infection should serve to kill the snail host and perhaps eliminate schistosomiasis as a major health problem in the Yemen.

A third article of the series reports on a serologic and bacteriologic survey. Cultures from some 358 fecal samples indicate that both Salmonella and Shigella infections occur in all the various representative locations in Yemen. Serologic studies suggest that typhoid and paratyphoid fevers are highly endemic. Brucellosis appears fairly prevalent. Over 50% of the sera were positive by the standard Kahn test. The positive Kahn tests indicate that treponematosis is very prevalent in Yemen and, together with further findings, suggest that bejel also is present.

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Temperature, Humidity, and Upper Respiratory Diseases

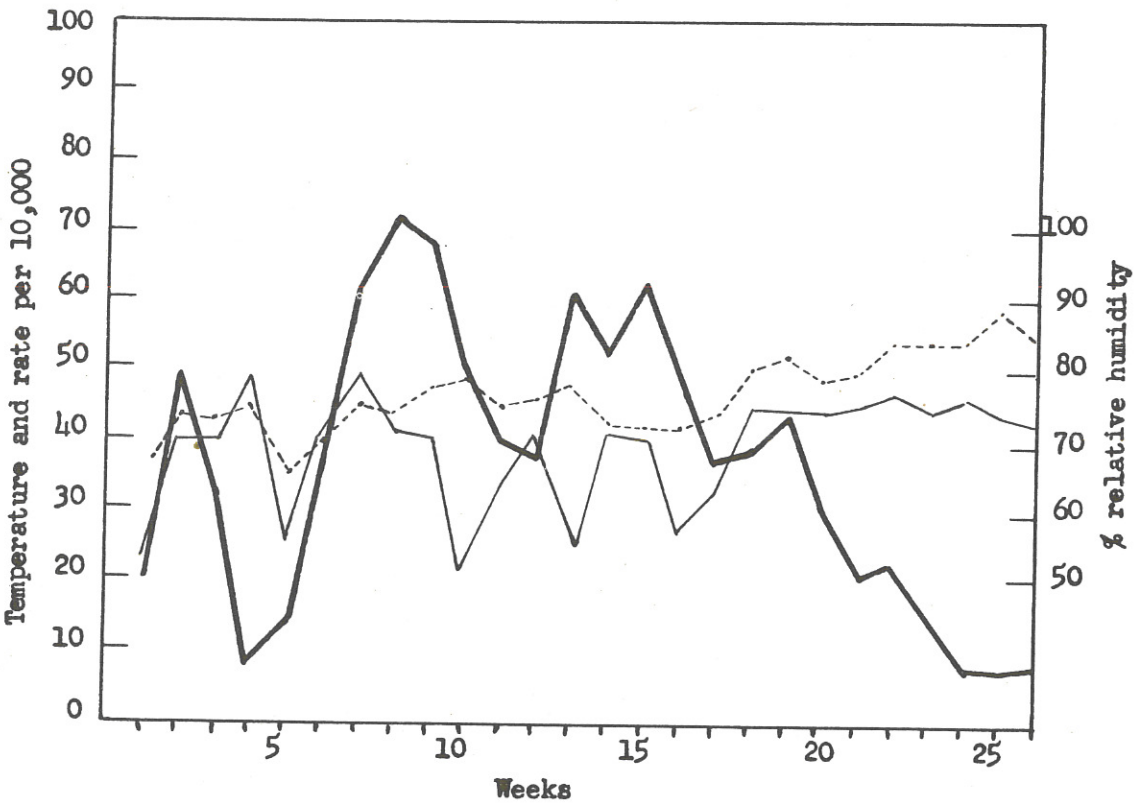
U. S. Navy Preventive Medicine Unit #5 reports that a study has been made to determine by nasopharyngeal cultures the incidence of beta-hemolytic streptococcus among recruits at the Naval Training Center, San Diego, Calif. The study, reported by CAPT H. K. Sessions (MC), LCDR G. S. Stains (MSC), and HMC H. M. Munro, was made during the 6-month period December 1951 to May 1952 and a 1-month period in August and September 1952. The sample population each day consisted of 30 individuals reporting to morning sick call with upper respiratory complaints and the first 10 reporting for conditions other than upper respiratory.

The incidence of recovery of beta-hemolytic streptococcus and Lancefield Group "A" indicated that during the winter months these organisms were widely disseminated among recruits, reaching a rate of 40.1% for the month of March; whereas during the summer months the rate was relatively low, never exceeding 12%.

There was very little difference in the over-all recovery rate of Group "A" beta-hemolytic streptococcus in those with and without respiratory complaints, which may indicate that the high incidence of streptococcus did not materially influence the upper respiratory admission rate. For a 10-week period beginning in mid-February, however, the recovery of Group "A"

streptococci was substantially greater among the recruits with respiratory illness than among the control group, and concurrent with this observed difference in streptococcal recovery was an increase in admissions for tonsillitis and pharyngitis. Hence the evidence, although inconclusive, suggests that during this limited period of the respiratory season, streptococcal infections may have comprised a considerable portion of the upper respiratory admissions.

Upper respiratory admissions per 10,000 recruits compared with temperature and relative humidity variations during winter phase 26-week study period



Upper respiratory admissions rate/10,000
Weekly average relative humidity
Lowest temperature during week

A study of the rheumatic fever admission rate in relation to the incidence of recovery of Group "A" beta-hemolytic streptococcus revealed that the rate began to increase about 3 weeks after the high incidence of streptococcus.

A close correlation was also shown to exist between the fluctuation of the weekly average relative humidity and the lowest temperature recorded for the week with the weekly upper respiratory admission rate. The data are illustrated in the graph.

The fall in relative humidity followed by a rise in the upper respiratory admission rate is an interesting observation which bears further study and could be repeated at other activities. Admission data and reports of temperature and humidity from the local weather station could be used. Summaries of such studies, whether they appear to lend support to the suggested correlation or to weaken it, are invited as contributions to the Preventive Medicine Section of the Medical News Letter. Observations for the period September through June in any year are suggested, and the diagnostic titles included in the term "upper respiratory disease" might well be specified.

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Current Navy Position on Use of Influenza Vaccine

The fact that influenza vaccines stimulate antibodies against influenza has been known for several years. It has not been demonstrated conclusively, however, that the stimulation is sufficient to prevent influenza in vaccinated persons who are exposed to infection. There is also an additional difficulty that interferes with the production of vaccines suitable for routine use. There are many strains of influenza virus that are capable of causing infections. The strains vary from year to year; and a vaccine, to be potentially effective, must contain a sufficient amount of the strain that is currently causing illness. Further, immunizations should, for best effect, be completed before an epidemic strikes the community.

These considerations have guided the Navy's decision not to use vaccines against influenza this year. Extensive trials with vaccines are being conducted at the Naval Training Center, Great Lakes, and at Army and Air Force activities which may provide information on these points that would justify its use in the future.

Venereal Disease Control

Observations From the Field

A letter from the field includes the following comments on practices observed by a medical officer over a 45-day period:

"During this period it was noted that there was a great variance in the venereal disease prevention program carried out by the various ships of that fleet. It was noted that one cruiser was still injecting Argyrol intraurethrally as part of the prophylaxis. Some ships were using the prophylactic ointment intraurethrally. There was no uniformity in the control of the penicillin tablets. One ship, a cruiser, merely sent a corpsman ashore with several bottles of penicillin tablets and he gave 2 tablets (500,000 units) to each man who wanted them. There was no accounting of the penicillin

tablets. There was no uniformity of treatment of acute gonococcus infection of the urethra. Some ships routinely gave 5 injections of penicillin while others found that 1 injection was satisfactory.

"There was no uniformity in the criteria for diagnosis, the reporting and the treatment of nongonococcic urethritis. Many cases reported as such improved after 1 or 2 days without treatment other than an admonishment NOT to milk down the urethra after each urination. Others received a cure from Sitz baths for 2 to 4 days. Still others required prostatic massage, the whole course of antibiotic treatment, the sulfonamides, and finally mental assurance that they did not have a dreaded disease. Most ships do not have facilities for the culture of urethral discharge and the differentiation of gonorrhea from nongonococcic urethritis often rested with a laboratory slide prepared and examined by a man with little or no laboratory training. Often a diagnosis of nongonococcic urethritis was made after 1 smear reported as negative for gonococci, and treatment promptly started without further laboratory work."

(NOTE: No drug of choice has been settled upon for the treatment of nongonococcic urethritis. Those who have worked in this field, however, seem to favor terramycin. Usually a dosage schedule of 0.5 gm. every 6 hours for 4 or 5 days is sufficient.)

Attention is invited to BuMed Instruction 6222.2 regarding current venereal disease prophylaxis measures.

It has also been noted that some ships and shore activities are distributing oral penicillin tablets to personnel prior to their going on liberty. This practice is not in accordance with the directions contained in BuMed Instruction 6222.3, paragraph 3a of which provides: "Tablets shall be administered for prophylaxis of gonorrhea to individuals admitting sexual exposure only upon request. The drug shall be taken in the presence of the person issuing the drug and limited to one 250,000 unit size tablet following each exposure, or group of exposures."

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Postgraduate Course in Venereal Disease

A venereal disease postgraduate course for military and civilian venereal disease control officers will be given at the Public Health Service Medical Center, Hot Springs National Park, Ark., Apr. 13 through 17. Captain O. L. Burton (MC) USN, Director of the Preventive Medicine Division of the Bureau of Medicine and Surgery, has been invited to speak. He will appear at the morning session, April 17, and his subjects will be "Nongonococcic Urethritis" and "Venereal Disease Control Activities in the U. S. Navy."

General Sanitation

Habitability Aboard Ship

Included in the term "habitability" as it is defined by the authors are all components of design and construction which make a ship more livable and comfortable—ventilation, lighting, color schemes, noise reduction, furniture design and arrangement, relationships between compartments, and all other phases of human engineering.

The article discusses the limited use of air conditioning on Navy vessels in the past and its possibly increased use in the future, along with other features of comfort, privacy, and attractiveness in living areas. The Bureau of Ships has utilized industrial designers to assist in the development of plans for such features in ships of the future. The Bureau of Medicine and Surgery conducted physiologic studies several years ago on the need for air cooling and the minimum requirements of air conditioning for personnel efficiencies. Basic points established by these studies are included in the article.

Not only have improved features been incorporated in designs of new and future ships, but conditions on existing older vessels and means of improving them have been the subject of exhaustive surveys. These surveys have been conducted by the Commander, Operational Development Force, Atlantic Fleet, at the request of the Chief of Naval Operations, in cooperation with the Bureau of Ships.

It is recognized that in all efforts to provide better living conditions for those aboard Navy vessels, a balance must be achieved between the ideal and the practical, between the essential and the desirable. Added equipment takes added space and usually requires additional men to operate it, and these men will need living space. This complicates the problem. But the man aboard ship may rest assured that human engineering has come into its own. Habitability is now as much a military characteristic as machinery for propulsion and armaments on Navy ships. (BuShips Journal, Feb. 1953, LCDR P. F. ErkenBrack and D. S. Berres)

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PHS Official Classifications

The Public Health Service, Federal Security Administration, has released two lists of its officially approved sources of supply. These listings are dated 1 January 1953; they supersede all preceding ones and will be superseded by the respective lists of 1 July 1953.

One is the "Official Classification of Vessel Watering Points" for the loading of potable water in all United States ports of call. The Bureau of Medicine and Surgery, the Bureau of Ships, and the Chief of Naval Operations have been provided with copies. Field activities desiring copies should re-

quest them from regional offices of the Public Health Service. These offices are listed in BuMed Instruction 6200.2.

The other listing is the "Official Classification of Milk and Frozen Dessert Sources." This list is intended only for the use of carrier companies, the Public Health Service, and State and local agencies concerned with the inspection of the sources. Navy sanitarians are advised to consult the Sanitation Compliance Ratings of Interstate Milk Shippers of 1 December 1952, mentioned in the Medical News Letter for 6 March 1953. These ratings will be useful in compiling approved lists of suppliers for Navy activities. The Sanitation Compliance Ratings may be procured from the appropriate regional medical director of the Public Health Service.

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